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| 10/039,279 | 01/04/2002 | Rajendra S. Yavatkar | 10559-568001 / P12782 | 8329 |
| 20985 | 7590 | 08/04/2006 | | |
| FISH & RICHARDSON, PC P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022 | | | EXAMINER HALIYUR, VENKATESH N | |
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| | | | 2616 | |

DATE MAILED: 08/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/039,279 | Applicant(s) YAVATKAR ET AL. | |
| | Examiner Venkatesh Haliyur | Art Unit 2616 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The indicated allowability of claims 1-15 communicated via office action of 5/17/2006 is withdrawn in view of the newly discovered reference(s) to Gridley and Alfieri et al. Rejections based on the newly cited reference(s) follow.
2. Claims 1-15 are pending in the application. Claims 16-53 cancelled by the applicant.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2,6,12-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Gridley [US Pat: 5,926,473].

Regarding claim 1, Gridley in the invention of "Distributed Processing Ethernet Switch with Adaptive Cut-Through Switching" disclosed a packet switching system using

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a distributed implementation of a routing control protocol to route a packet between a plurality of computer networks (**Fig 2**), comprising: a control-plane (**item 105 of Fig 2, LAN Controller Bus**) having a control-plane processor (**item 115 of Fig 2**) to implement a central control portion of the control protocol; a plurality of forwarding-planes (**items 110a-110h of Fig 2**), each having a forwarding-plane processor (**LAN CTL #1 to LAN CTL #8, items 110a-110h of Fig 2**) to implement an offload control portion (**apply cut through method for packet header processing, col 2, lines 5-48**) of the control protocol and a plurality of ports (**Port-1 to Port-8 of Fig 2**) to connect the router to the computer networks; and a back-plane (**item 20 of Fig 2**) to connect the control plane to the plurality of forwarding-planes and to enable processing of the packet (**item 130 of Fig 2**) based on an implementation of the control protocol by the control-plane and the forwarding-plane [**Figs 1-4, col 2, lines 5-67, col 3, 1-67, col 4, lines 1-65**] .

Regarding claims 2,6 Gridley disclosed a method for the offload control portion of the control protocol generates an outgoing control message and the offload control portion of the control protocol responds to an incoming request to the control protocol (**packet processor sends destination address to the system card**) [**col 2, lines 5-48**].

Regarding claim 12, Gridley disclosed plurality of ports include a plurality of virtual interfaces on a physical interface [**Fig 2, col 4, lines 30-41**].

Regarding claim 13, Gridley disclosed that the forwarding-plane processor includes: a processing engine (**item 130 of Fig 2**) to implement a plurality of packet

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processing functions for routing the packet; and a general purpose processor (**system controller, item 230 of Fig 3**) to implement the offload control portion of the control protocol [**Figs 2,3, col 3, lines 20-67, col 4, lines 1-41**].

Regarding claim 14, Gridley disclosed the off-load control portion of the control protocol operates to reduce a control flow load on the back-plane between the control-plane and the forwarding plane [**col 3, lines 32-56**].

Regarding claim 15, Gridley disclosed the off-load control portion of the control protocol operates to reduce a processing load (**improve efficiency**) on the control-plane processor [**col 4, lines 43-67, col 5, lines 1-13**].

Claim Rejections – 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3-5,7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gridley [US Pat: 5,926,473] in view of Alfieri et al [US2002/0099849].

Regarding claims 3-5, 7-11 Gridley disclosed the distributed processing for Ethernet protocol for sending and receiving Ethernet packets (**Figs 1&2, col 3, lines 20-56**) for the packet switching system but fails to disclose the standard control

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protocols OPEN SHORTEST PATH FIRST (OSPF) protocol, RESOURCE RESERVATION (RSVP), Intra domain intermediate system to intermediate system routing protocols and the corresponding outgoing and incoming control messages like HELLO, PATH and link status request messages.

However, Alfieri et al. disclosed in their invention of "Dense Virtual Router Packet Switching" a method for reducing the processing load of a router (**item 14 of Fig 1**) interworking with a plurality of control protocols including standard protocols well known in the art like OSPF, RSVP, Border Gateway (BGP/Inter domain protocol), Routing Information Protocol (RIP/Intra domain protocol), protocols with standard messages like HELLO, PATH, RESV and link status request messages (**Figs 1-3, para 0019-0032**).

Therefore it would have been obvious for one of ordinary skill in the art at the time the invention was made to use the teachings of Alfieri et al on the system of Gridley to include OSPF, RSVP, Intra domain intermediate system to intermediate system routing protocols that generates HELLO, PATH RESV, and link status request control messages. One is motivated as such to offload control messages to a control processor to improve the efficiency of packet processing and forwarding packets in plurality of forwarding plane (**Alfieri et al, para 0007-0011**).

Double Patenting

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226

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(Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1-15 of this application conflict with claims 1-48 of Application No.

10/713,238 (US Pub: 2004/0136371). 37 CFR 1.78(b) provides that when two or more

applications filed by the same applicant contain conflicting claims, elimination of such

claims from all but one application may be required in the absence of good and

sufficient reason for their retention during pendency in more than one application.

Applicant is required to either cancel the conflicting claims from all but one application

or maintain a clear line of demarcation between the applications. See MPEP § 822.

Regarding claims 1,2,6,10, copending application 10/713,238 disclosed a router **(system)** using a distributed implementation of a routing control protocol to route a packet between a plurality of computer networks, comprising: a control-plane having a control-plane processor **(control processor)** to implement a central control portion of the control protocol; a plurality of forwarding-planes **(line cards)**, each having a forwarding-plane processor to implement an offload control portion of the control protocol and a plurality of ports **(paths or connection)** to connect the router to the computer networks; and a back-plane to connect the control plane to the plurality of forwarding-planes and to enable processing of the packet based on an implementation of the control protocol by the control-plane and the forwarding-plane and further

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disclosed offload control portion of the control protocol generates an outgoing control message and the offload control portion of the control protocol responds to an incoming request to the control protocol and plurality of protocols **[refer to claims 1-8,14,15,18-21,26-32 of copending application 10/713,238]**.

Regarding claim 3,7, copending application 10/713,238 disclosed the control protocol is OPEN SHORTEST PATH FIRST protocol (**method for handling interior gateway signaling protocol**) and the outgoing control message is a HELLO message and the incoming request is a link status request **[refer to claims 8-9,26-40 of copending application 10/713,238]**.

Regarding claim 4,5,8,9 copending application 10/713,238 disclosed that the control protocol is RESOURCE RESERVATION protocol (**RSVP**) and the outgoing control message is a PATH message and INTRA-DOMAIN INTERMEDIATE SYSTEM TO INTERMEDIATE SYSTEM ROUTING PROTOCOL and the outgoing control message is a HELLO message and the incoming request is a RESV request **[refer to claim 8-13,22-26 of copending application 10/713,238]**.

Regarding claim 11, copending application 10/713,238 disclosed the plurality of control protocols include OPEN SHORTEST PATH FIRST and RESOURCE RESERVATION (**RSVP**) **[refer to claim 8-13,22-26 of copending application 10/713,238]**.

Regarding claim 12, copending application 10/713,238 disclosed the plurality of ports include a plurality of virtual interfaces (**adjacent or neighboring**) on a physical interface **[refer to claim 8-13,22-26,33-43 of copending application 10/713,238]**.

Regarding claims 13-15, copending application 10/713,238 disclosed the forwarding-plane processor includes: a processing engine to implement a plurality of packet processing functions for routing the packet; and a general purpose processor to implement the offload control portion of the control protocol and the off-load control portion of the control protocol operates to reduce a control flow load on the back-plane between the control-plane and the forwarding plane and the off-load control portion of the control protocol operates to reduce a processing load on the control-plane processor [refer to claim 1-21 of copending application 10/713,238].

Response to Arguments

9. The indicated allowability of claims 1-15 is withdrawn in view of the newly discovered reference(s) to Gridley and Alfieri et al.
10. Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Any inquiry concerning this communication or earlier communications should be directed to the attention to Venkatesh Haliyur whose phone number is 571-272-8616. The examiner can normally be reached on Monday-Friday from 9:00AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached @ (571)-272-3139. Any inquiry of a general

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nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (571)-272-2600 or fax to 571-273-8300.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197(toll-free).

Venkatesh Haliyur

Patent Examiner

WH
07/28/06


RICKY Q. NGO
SUPERVISORY PATENT EXAMINER